

Periscope.

ANATOMY AND PHYSIOLOGY.

88. LE CENTRE DE L'AGRAPHIA ET LA SURDI-MUTITE (The Center of Agraphia and Deaf-Mutism). E. Brissaud (La Presse médicale, 15 Janvier, 1898, p. 25).

The author criticises the theory of Marie, that spoken language is the result of the activity of a preformed center, while written language comes from a center developed by the acquirement of writing. This theory does not, apparently, coincide with all the facts, particularly the facility with which children acquire foreign languages, and in particular, the ability to communicate their thoughts by means of their fingers. Brissaud thinks language is largely a matter of mnemonic reflex; that is to say, the infant perceives an object, hears its name mentioned, learns to articulate that name, and remembers it. It is equally easy, however, for it to learn to imitate a gesture, serving instead of the word, as the name of the object. He cites the interesting case of a child, well formed and intelligent, who, at the age of seven years, became totally deaf as a result of double otitis media. As soon as the deafness was complete the child became dumb. Later it was taught the finger language, which it acquired with extraordinary rapidity, and subsequently again learned phonation; that is to say, the same patient exhibited a power of functional adaptation upon three occasions, apparently independent of any preformed center. SAILER.

89. DER CENTRALE URSPRUNG DES N. VAGUS (The Central Origin of the Vagus Nerve). E. Bunzl-Federn (Monatsschrift für Psychiatrie und Neurologie, 5, 1899, p. 1).

Bunzl-Federn has cut the vagus nerve in rabbits in different parts of its course, and studied the chromatolysis resulting in the cells of origin of this nerve.

When the vagus was cut above the exit of the laryngeus superior, but below the exit of the ramus auricularis, most of the cells of the dorsal nucleus on the operated side degenerated, and almost as many degenerated when the vagus was cut below the exit of the laryngeus superior; showing that fibers of the latter branch are connected with few cells in the dorsal nucleus. This was shown also when the laryngeus superior was cut alone. A few degenerated cells in the opposite dorsal nucleus were found after division of the vagus.

The dorsal nucleus, even in its proximal portion, does not belong to the glossopharyngeus, because after division of the vagus only degenerated cells were found in the proximal portion of the dorsal nucleus.

When the vagus was cut below the exit of the laryngeus superior and the ramus auricularis, normal cells were found in the dorsal nucleus; and degenerated cells were found in this nucleus when the laryngeus superior was cut alone. The laryngeus superior is, therefore, certainly, and the ramus auricularis is probably, in relation with the dorsal nucleus. This is contrary to the views of Dees, who believes that the dorsal nucleus is motor. Bunzl-Federn thinks that the vagus ter-

minates in the dorsal nucleus of the same side, and is in relation with the dorsal nucleus of the opposite side.

When the vagus was cut above or below the exit of the laryngeus superior, most of the cells of the ventral nucleus (nucleus ambiguus) degenerated. Only in one out of five cases were a few degenerated cells found in the nucleus ambiguus of the opposite side. The vagus is not connected, therefore, with the contralateral nucleus ambiguus. The ventral nucleus gives origin to the vagus, but contains cells belonging to other nerve fibers, though not to the accessorius.

Cells near the central canal on the medial border of the anterior horn in the upper part of the cervical cord, and lower part of the medulla oblongata are in especial relation with the laryngeus superior.

The accessorius arises from a nucleus in the anterior horn of the cervical cord and the continuation of this nucleus in the medulla oblongata—which is not a part, however, of the vagus nucleus. The bulbar fibers pass into the vagus. The three or four more superiorly situated roots in the medulla oblongata, having their exit at the sulc. post. lat., are in connection with the dorsal nucleus of the vagus, and are united with the accessorius in a part of their course, but really belong to the vagus.

The motor fibers of the laryngeus superior, and the motor fibers of the thoracic and abdominal vagus, arise in the "dense formation" (proximal portion) of the ventral nucleus; the motor fibers of the laryngeus inferior arise in the "loose formation" (distal portion) of this nucleus.

SPILLER.

90. LA THÉORIE DES RÉFLEXES (The Theory of Reflexes). E. de Mas-sary (La Presse médicale, 3 Février, 1898, p. 69).

Two arcs are concerned in the production of reflexes; the central, composed of fibers passing from the nuclei of Goll and Burdach to the cortex, with perhaps accessory arcs through the cerebellum; and of the fibers passing from the cortex to the ganglion cells of the anterior cornua of the cord. The peripheral neurons are the accessory fibers passing through the spinal ganglia to the nuclei of Goll and Burdach, and the motor fibers from the ganglia of the anterior cornua to the muscles. Any interference with the peripheral arc produces abolition of reflex. Any interference with the central arc causes exaggeration of reflex. This exaggeration is the result of the inhibitory action of the cells of the cerebral cortex, and is, therefore, produced chiefly by a lesion placed between these and the peripheral arc, that is to say, in the pyramidal tract.

SATLER.

91. ON THE BILATERAL ACTION OF THE LATISSIMUS DORSI IN HEMIPLEGIA. C. E. Beevor (British Med. Journal, No. 1970, p. 976).

While examining a patient's chest the author observed that in coughing the latissimus dorsi contracted on both sides, giving a powerful expiratory effort, and this action can readily be felt by any one placing the finger and thumb on the muscle at the posterior border of the axilla and giving a strong cough. In the text books on anatomy this muscle has always been described as a muscle of inspiration, and never as one of expiration.

On placing the hand on the posterior axillary fold and inspiring deeply, some contraction can be felt, but it is very much less than the powerful movement felt on the expiration produced in coughing. It is difficult to understand how the same muscle can be both inspiratory